

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A fire extinguisher, comprising:
  - (a) a tank; and
  - (b) a gas generator breech connected to said tank, wherein a hermetically sealed gas generator cartridge is provided within said gas generator breech.
2. The fire extinguisher of Claim 1, wherein said tank comprises a fire suppressant.
3. The fire extinguisher of Claim 2, wherein the fire suppressant comprises at least one of a perfluorocarbon or hydrofluorocarbon fire suppressant.
4. The fire extinguisher of Claim 2, wherein the fire suppressant comprises 1,1,1,2,3,3,3-heptafluoropropane.
5. The fire extinguisher of Claim 2, wherein the fire suppressant comprises a water-based fire suppressant.
6. The fire extinguisher of Claim 2, wherein the fire suppressant comprises water, potassium acetate, and a surfactant.
7. The fire extinguisher of Claim 1, wherein the gas generator cartridge comprises a propellant comprising a nitrogen-containing fuel, an oxidizer, and a coolant.
8. The fire extinguisher of Claim 1, wherein the gas generator cartridge comprises a propellant comprising 5-aminotetrazole, strontium nitrate, and magnesium carbonate.
9. The fire extinguisher of Claim 1, wherein said gas generator cartridge comprises an aluminum container.
10. The fire extinguisher of Claim 1, wherein said gas generator cartridge comprises a steel container.

11. The fire extinguisher of Claim 1, wherein said gas generator cartridge comprises a precursor of a beverage or food can.

12. The fire extinguisher of Claim 1, wherein said gas generator cartridge comprises a precursor of a soda pop can.

13. The fire extinguisher of Claim 1, wherein said gas generator cartridge comprises a lid, wherein said lid comprises an area of localized weakness.

14. The fire extinguisher of Claim 1, wherein said gas generator cartridge comprises a lid, wherein said lid does not have an area of localized weakness.

15. The fire extinguisher of Claim 14, further comprising a cover having an initiator assembly in proximity to the area of the gas generator cartridge lid.

16. The fire extinguisher of Claim 1, further comprising a burst disk or release poppet at an outlet to said tank.

17. The fire extinguisher of Claim 16, further comprising a nozzle or distribution system downstream of said burst disk or release poppet.

18. The fire extinguisher of Claim 1, wherein the gas generator breech comprises a cylindrical sleeve and end plate, said sleeve and end plate are interior to said tank.

19. The fire extinguisher of Claim 18, wherein the gas generator breech comprises hole(s) in said cylindrical sleeve or end plate to provide passage of combustion gases.

20. The fire extinguisher of Claim 1, wherein the gas generator breech comprises an annular gap partly along the side of the gas generator breech, a bottom gap at the breech base, and a hole from the breech interior to the bottom gap, said gaps and hole to provide a passage for combustion gases.

21. The fire extinguisher of Claim 1, wherein the gas generator cartridge has a burst pressure in the range of about 500 psig to about 4000 psig.

22. The fire extinguisher of Claim 1, wherein the gas generator breech does not have a burst shim or a release poppet.

23. The fire extinguisher of Claim 1, wherein the gas generator cartridge exterior is open to the tank interior.

24. The fire extinguisher of Claim 1, wherein the gas generator cartridge comprises a precursor of a beverage or food can.

25. The fire extinguisher of Claim 1, wherein the gas generator cartridge comprises a precursor of a soda pop can.

26. A gas generator cartridge comprising a hermetically sealed container containing a solid propellant comprising 5-aminotetrazole, strontium nitrate, and magnesium carbonate.

27. A gas generator cartridge comprising a hermetically sealed container containing a solid propellant comprising a nitrogen-containing fuel, an oxidizer, and a coolant compound.

28. The cartridge of Claim 27, comprising a booster propellant.

29. The cartridge of Claim 28, wherein said booster propellant comprises 5-aminotetrazole, strontium nitrate, and magnesium carbonate.

30. The cartridge of Claim 28, comprising a screen or perforated cup dividing said solid propellant from said booster propellant.

31. The cartridge of Claim 27, comprising one or more foam pads placed between the cartridge container bottom or lid, and propellant.

32. The cartridge of Claim 27, comprising a perforated tube interior to said container, and wherein said solid propellant is interior to said tube.

33. The cartridge of Claim 32, comprising a permeable stiffening material between the perforated tube and the container wall.

34. The cartridge of Claim 27, wherein said container has an average wall thickness of about 2/1000 inch to about 10/1000 inch.

35. The cartridge of Claim 27, wherein said container is made from aluminum.

36. The cartridge of Claim 27, wherein said container is made from steel.

37. The cartridge of Claim 27, wherein said cartridge has a burst pressure of about 500 psig to about 4000 psig.

38. The cartridge of Claim 27, wherein said container comprises a precursor of a food or beverage can.

39. The cartridge of Claim 27, wherein said container comprises a precursor of a soda pop can.

40. A method for making a fire extinguisher, comprising installing a hermetically sealed gas generator cartridge in the gas generator breech of a fire extinguisher tank so that the gas generator cartridge exterior is open to the tank interior.

41. A method for making a gas generator cartridge, comprising:

- (a) placing a solid propellant within a container; and
- (b) hermetically sealing said container with a lid, wherein said solid propellant comprises a solid fuel, an oxidizer, and a coolant.

42. A method for making a gas generator cartridge, comprising:

- (a) obtaining a precursor container of a beverage or food can and placing a solid propellant therein; and
- (b) hermetically sealing said precursor container of a beverage or food can with a lid.

43. The method of Claim 42, wherein said precursor container is of a soda pop can.

44. A method for making a fire extinguisher, comprising:

(a) obtaining a precursor container of a beverage or food can having a propellant hermetically sealed therein; and

(b) installing said hermetically sealed precursor container in the gas generator breech of a fire extinguisher tank.

45. The fire extinguisher of Claim 44, wherein said precursor container is of a soda pop can.

46. A fire extinguisher, comprising a tank, wherein a hermetically sealed, aluminum, gas generator cartridge is provided within said tank.

47. A fire extinguisher, comprising a tank, wherein a hermetically sealed, precursor container of a beverage or food can is provided within said tank.

48. The fire extinguisher of Claim 47, wherein said precursor container is of a soda pop can.

49. A gas generator cartridge, comprising a hermetically sealed, aluminum container having propellant therein.

50. A gas generator cartridge, comprising a hermetically sealed precursor container of a beverage or food can having propellant therein.

51. The gas generator cartridge of Claim 50, wherein said precursor container is of a soda pop can.

52. A fire extinguisher, comprising:

(a) a tank having a fire suppressant; and

(b) a gas generator breech connected to said tank, wherein said breech is configured to allow gas passage from the interior of the breech to the interior of the tank.

53. The fire extinguisher of Claim 52, wherein said breech does not have a shim or release poppet in the path of the gas passage.

54. A fire extinguisher, comprising:
- (a) a tank having a fire suppressant; and
  - (b) a gas generator breech connected to said tank; and
  - (c) a gas generator cartridge with a container configured to be burst at a predetermined pressure, wherein said breech does not have a shim or release poppet.